

CLAIMS

What is claimed is:

1. A mobile platform fire detection system, comprising:
5 a plurality of smoke detectors locatable in a compartment of a mobile platform;
a plurality of heat sensors positioned in the compartment; and
at least one indication panel locatable outside of the compartment, the panel operable to identify an alarm condition of each of the smoke detectors
10 and the heat sensors.
2. The system of Claim 1, comprising:
a plurality of smoke detector signaling indicators positioned on the
15 indication panel, each connectable to an individual one of the smoke detectors and operable to indicate the alarm condition of the individual smoke detector;
wherein a first one of the smoke detector signaling indicators operably indicating the alarm condition defines a first smoke indication signal differentiable from a second smoke indication signal produced by any subsequent
20 one of the smoke detector signaling indicators to indicate the alarm condition.
3. The system of Claim 2, comprising:
a plurality of heat sensor signaling indicators positioned on the
25 indication panel, each remotely connectable to an individual one of the heat sensors and operable to indicate the alarm condition of the individual heat sensor;
wherein a first one of the heat sensor signaling indicators operably indicating the alarm condition defines a first heat indication signal differentiable
30 from a second heat indication signal produced by any subsequent one of the heat sensor signaling indicators to indicate the alarm condition.

4. The system of Claim 1, wherein each heat sensor comprises a threshold alarm set point.

5. The system of Claim 4, wherein the threshold alarm point
5 comprises a predetermined temperature of approximately 175 degrees F.

6. The system of Claim 3, wherein both the first smoke indication signal and the first heat indication signal comprise a blinking light.

10 7. The system of Claim 3, wherein both the second smoke indication signal and the second heat indication signal comprise a continuously-energized-on light.

8. The system of Claim 3, comprising:
15 a first color visually defining the plurality of smoke detector signaling indicators; and
a second color visually defining the plurality of heat sensor signaling indicators.

20 9. The system of Claim 1, wherein at least one of the heat sensors is positionable adjacent a compartment door.

10. The system of Claim 1, comprising a rate of heat increase indication operably provided by each heat sensor.

25 11. The system of Claim 10, comprising a rate of heat increase alarm signal operably provided by the indication panel.

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12. A mobile platform fire detection/indication system, comprising:
a plurality of smoke detectors;
a plurality of heat sensors;
a panel having a plurality of indicators, each of the indicators
5 remotely connectable to individual ones of the smoke detectors and the heat
sensors;
a compartment mimic disposed on the panel defining a general
configuration of a mobile platform compartment; and
a predetermined position for each of the indicators on the mimic
10 defining one of an approximate smoke detector location and an approximate heat
sensor location within the compartment.
13. The system of Claim 12, wherein each indicator comprises an
energizable light.
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14. The system of Claim 13, wherein each energizable light comprises
a light emitting diode.
15. The system of Claim 13, wherein each energizable light comprises:
20 a first color lens visually defining each indicator connectable to one
of the smoke detectors; and
a second color lens visually defining each indicator connectable to
one of the heat sensors.
16. The system of Claim 12, wherein each of the indicators defines one
25 of a plurality of compartment zones.
17. The system of Claim 16, wherein each compartment zone
comprises a zone lighting device operably illuminated when a predetermined one
30 of the smoke detectors operably alarms.

18. The system of Claim 17, comprising:
an energizable light connectable to each of the heat sensors; and
a predetermined one of the energizable lights being positionable
one of within and adjacent to at least one of the compartment zones.

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19. The system of Claim 12, comprising:
at least one first designator positionable on the mimic;
wherein a location of the first designator visually defines a
corresponding location of a piece of fire fighting equipment located in the
10 compartment.

20. The system of Claim 19, comprising:
at least one second designator positionable on the mimic;
wherein a location of the second designator visually defines a
15 corresponding location of a compartment door.

21. A method for identifying the presence of smoke and fire in a mobile platform, the mobile platform having a plurality of smoke detectors and a plurality of heat sensors, each connectable through a control loop to a predetermined indicator on a remote panel, the method comprising:

5 positioning the panel adjacent an entrance into a mobile platform compartment;

 routing an alarm signal from each of the smoke detectors through the control loop;

 operably distinguishing a first alarming smoke detector using the
10 control loop;

 passing an alarm signal from each of the heat sensors through the control loop; and

 operably identifying a first alarming heat sensor using the control
loop.

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22. The method of Claim 21, comprising energizing a first one of the predetermined indicators connectable to the first alarming smoke detector with a first smoke detector alarm pattern.

20 23. The method of Claim 22, comprising energizing a second one of the predetermined indicators connectable to the first alarming heat sensor with a first heat sensor alarm pattern.

 24. The method of Claim 22, comprising energizing a successive one of
25 the predetermined indicators connectable to a subsequently alarming smoke detector with a second smoke detector alarm pattern.

 25. The method of Claim 23, comprising energizing a successive one of
the predetermined indicators connectable to a subsequently alarming heat sensor
30 with a second heat sensor alarm pattern.

26. The method of Claim 21, comprising relay switching individual ones of the alarm signals from each of the smoke detectors through a capacitor.

27. The method of Claim 21, comprising relay switching individual ones of the alarm signals from each of the heat sensors through a capacitor.

28. The method of Claim 21, comprising:
5 identifying each of the alarm signals from each of the smoke detectors using a first color; and
designating each of the alarm signals from each of the heat sensors using a second color.

29. A method for detecting a hazardous condition within a plurality of distinct zones of a mobile platform, the method comprising:

sensing for both an existence of smoke and for an elevated temperature within each said zone;

5 communicating signals relating to said existence of smoke and said elevated temperature, for each said zone, to at least one indicator panel;

associating each pair of said signals with a specific one of said zones;

10 when receiving an indication of at least one of an elevated temperature condition and a smoke alert condition for any of said zones, determining which one of said elevated temperature condition and which one of said smoke alert condition occurred first; and

15 displaying information to an occupant of said mobile platform of the existence of said elevated temperature condition and said smoke alert condition for a given said zone, and identifying which one of said elevated temperature condition and said smoke alert condition occurred first in time.

30. The method of claim 29, further comprising simultaneously displaying information to said occupant of a status of said sensing operations for each said interior area within said mobile platform.

31. The method of claim 30, further comprising using at least one of said display panels for each said interior area to display said information simultaneously to said occupant.

32. A method for detecting a hazardous condition within a structure,
comprising:

dividing the structure into a plurality of distinct zones;

5 sensing for both an existence of smoke and for an elevated
temperature within each said zone;

communicating signals relating to said existence of smoke and said
elevated temperature, for each said zone, to at least one indicator panel;

10 associating each pair of said signals with a specific one of said
zones;

when receiving an indication of at least one of an elevated
temperature condition and a smoke alert condition for any of said zones,
determining which one of said elevated temperature condition and which one of
said smoke alert condition occurred first; and

15 displaying information on said indicator panel to an occupant of said
structure of the existence of said elevated temperature condition and said smoke
alert condition for a given said zone, and which one of said elevated temperature
condition and said smoke alert condition occurred first in time.

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